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Idaho Parcel Framework Standard

A product of the
Parcel Technical Working Group (TWG),
a subgroup of the Cadastral Technical Working Group (TWG)

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1. Introduction to the Parcel Framework Standard

A statewide Parcel Framework layer is a critical source of information for resource land management, community and economic development needs, infrastructure maintenance, research and analysis, homeland security, business development, public safety, and more. Most organizations have business needs that can benefit from a Parcel Framework layer, from the private sector to local, state, and federal government agencies.

A Parcel Framework layer is intended to facilitate integration and sharing of parcel data published by this variety of entities and to enhance the dissemination and use of the parcel information to the public domain.

This standard was developed by the Parcel Technical Working Group (TWG), a subgroup of the Idaho Cadastral TWG, for The Idaho Map (TIM). The initial standard was written by Michael Ciscell, Sarah Higuera, Anne Kawalec, Michele Porter, and Gary Wilbert.

1.1. **Mission and Goals of the Standard**

This Idaho Parcel Framework standard describes a statewide parcel layer stored as polygons in a geographic information system (GIS). The Idaho Parcel Framework layer will contain parcels from a variety of cooperating entities that maintain GIS parcel data, including local, county, state, federal, and tribal organizations.

It will communicate with, and may have similar attributes to, other Idaho Framework data standards as much as possible. It will establish the minimum attributes and geospatial database schema for the Parcel Framework layer.

The Parcel Framework layer will be regularly updated, publically accessible, and beneficial to agencies and data customers. The fields in the Parcel Framework standard will be general enough to incorporate basic information from the agencies and will allow for expansion to a more complicated data structure and schema as participation increases.

The ultimate goal is that all Idaho agencies with geospatial parcel data will contribute their information to the Parcel Framework layer.

1.2. **Relationship to Existing Standards**

This Parcel Framework standard will be related to other Idaho Framework standards that exist or are in development.

Other standards referenced while creating this standard include:

Idaho Geospatial Council Executive Committee, Public Safety Technical Working Group, February 16, 2010. *Structures Data Exchange Standard*, Version 0.4. Internet.

http://gis.idaho.gov/framework/structures/FinalDraftStructureStandard_vdot4.pdf

Idaho Geospatial Council Executive Committee, Public Safety Technical Working Group, November 30, 2009. *Data Exchange Standard for Emergency Service Zones*, Revision 6. Internet. http://gis.idaho.gov/igo/Draft%20Data%20Exchange%20Standard%20for%20ESZ%20rev6.pdf

INSIDE Idaho, April 2010. Project overview and geospatial metadata for *Road Transportation Framework of Idaho*, University of Idaho, Moscow, Idaho. Internet. http://insideidaho.org/geodata/frameworkPilot/transportation/

Federal Geographic Data Committee (FGDC), Subcommittee on Cadastral Data, May 2008. *Cadastral Data Content Standard for the National Spatial Data Infrastructure*, Version 1.4. Internet. http://www.nationalcad.org/data/documents/CADSTAND.v.1.4.pdf

1.3. **Description of the Standard**

This standard describes the vision and geospatial data structure of a Parcel Framework layer in the state of Idaho. This standard is devised to be:

- Simple, easy to understand, and logical
- Uniformly applicable, whenever possible
- Flexible and capable of accommodating future expansions
- Dynamic in terms of continuous review

1.4. **Applicability and Intended Uses**

This standard applies to the Parcels element of the Cadastral theme of The Idaho Map (TIM).

When implemented, it will enable users to acquire geometry and information about Idaho parcels. It will increase interoperability between automated geographic information systems; enable sharing and efficient transfer of information between agencies and customers; and encourage partnerships between government institutions, the private sector, and the public in order to avoid duplication of effort and ensure effective management of information resources. It will help improve parcel data quality over time as errors will be identified and brought to the attention of the agencies.

This standard is not instruction on how agencies should design their own parcel databases. Rather, it is a standard for a statewide layer into which parcels can be incorporated.

This standard does not consider data sharing agreements, contracts, transactions, privacy concerns, or any other issues relating to the acquisition and dissemination of parcel data.

1.5. **Standard Development Process**

April - August 2010

The Parcel Technical Working Group (TWG), a subgroup of the Cadastral TWG, is a voluntary group of private, city, county, tribal, state, and federal representatives. In March 2010, the Parcel TWG chairperson called for a few TWG volunteers to begin developing the standard for the statewide Idaho Parcel Framework. A team of five gathered, representing private, county, state, and federal organizations.

The team looked to fellow Idaho Framework teams to see what other standards or datasets exist or are currently in development. Two were found at the time: the draft standards for Emergency Service Zones and Structures (both of which are under the Public Safety Framework). These draft standards were used as a reference.

With input from the Parcel Technical Working Group, the Parcel Standard Team wrote this Parcel Framework standard in the format required by the Idaho Information Technology Resource Management Council (ITRMC) Framework Standards Development Policy (P5030).

1.6. **Maintenance of the Standard**

This standard will be revised as needed and in accordance with the ITRMC Framework Standards Development Policy (P5030) guidance.

2. **Body of the Standard**

2.1. **Scope and Content**

The scope of the Parcel Framework standard is to describe a statewide, publicly-available geospatial layer which identifies the physical locations and attributes of parcels in Idaho.

2.2. **Need**

Parcels are a key dataset needed for resource land managers, community and business development needs, infrastructure maintenance, research, homeland security, public safety, and more. This standard provides the impetus to aggregate parcel data for centralized access and stewardship information.

2.3. **Participation in the Standard Development**

The development of the Parcel Framework standard adheres to the ITRMC Framework Standards Development Policy (P5030). The Parcel Standard Team tasked with developing this standard represents private, county, state, and federal organizations. As the standard is reviewed in accordance with Policy P5030 requirements, there will be

opportunity for broad participation and input by stakeholders in the development of this standard. The process will be equally broad for input on updates and enhancements to the standard. As with all Idaho Framework standards, public review and comments on the Parcel Framework standard is encouraged.

2.4. Integration with Other Standards

The Parcel Framework standard follows the same documentation format as other Idaho geospatial framework data standards. The parcel standard may contain some of the same attributes as other framework standards and may adopt the field name, definition, and domain from the other standards to promote consistency.

2.5. Technical and Operation Context

2.5.1. Data Environment

The data environment is a vector model, containing closed vector polygons with a specific standardized set of attributes pertinent to the Parcel Framework.

Parcel data must be submitted to the Parcel Framework layer in a format consisting of closed vector polygons.

2.5.2. Reference Systems

The Parcel Framework layer will be published in the Idaho Transverse Mercator (IDTM) NAD83 coordinate system, which is the State of Idaho's single zone coordinate system. Submitted data sources must have a defined coordinate system.

2.5.3. Global Positioning Systems (GPS)

Some data provided might contain geometry from GPS methods, and the provided metadata should describe this if applicable. However, geometry from a GPS is not required for data participating in the Idaho Parcel Framework layer.

2.5.4. Interdependence of Themes

Parcel data may be coincident with other framework data, such as cadastral, hydrography, roads, structures, etc. At this time there is no enforcement of coincidence or topology relationships between the Parcel Framework and other Idaho Framework layers.

2.5.5. Encoding

When data is imported into and exported from the Parcel Framework layer, encoding will take place to convert data formats and attributes, likely by the use of modeling or scripting.

2.5.6. Resolution

The Parcel Framework layer will accept data from agencies regardless of resolution. There will be a variety of spatial resolution in the parcel polygons across the Parcel Framework layer because of different data collection and processing methods of agencies. Metadata included with the source data should address this resolution topic.

2.5.7. Accuracy

The Parcel Framework layer will accept data from agencies regardless of accuracy. As with resolution, accuracy will also vary across the Parcel Framework layer due to the agencies' processes. Accuracy should be addressed in the submitted metadata. The Parcel Framework steward will not be responsible for poor accuracy found in submitted data.

2.5.8. Edge Matching

The Parcel Framework layer will not require that any submitted parcel data be edgematched within itself. Similarly, edge-matching will not be enforced within the Parcel Framework layer.

2.5.9. Unique Identifier

There is currently no plan to create and maintain a permanent unique identifier specific to each parcel polygon served in the Parcel Framework layer.

2.5.10. Attributes

Attributes are information that describes each parcel polygon. See Data Characteristics in Section 3 of this standard for required and optional Parcel Framework attributes.

2.5.11. Stewardship

Perpetual maintenance and other aspects of lifecycle management are essential to the Parcel Framework layer. Details of partnerships, their roles and responsibilities, and database design and processes will be set forth in a stewardship plan and other related documents in the future.

2.5.12. Records Management and Archiving

Records management and archiving for the Parcel Framework layer will be described in the forthcoming stewardship plan and related documents.

2.5.13. Metadata

The Parcel Framework layer metadata will describe the methods used to aggregate the individual parcel data sources, processes or crosswalks performed, attributes, and other information. This metadata will conform to metadata standards of the State of Idaho and the Federal Geographic Data Committee (FGDC). Submitted data sources must also have metadata.

3. Data Characteristics

3.1. Minimum Graphic Data Elements

The geometry of the features in the Parcel Framework database must be closed vector polygons.

3.2. Optional Graphic Data Elements

Not applicable.

3.3. Minimum Required Attributes for Public Distribution

The following attributes are required for all polygons in the Parcel Framework layer.

Field Name	Data Type	Length	Description	Required	Examples
PARCEL_ID	Text	TBD	The unique county or agency identifier for that parcel as used by the source agency.	Yes	County Parcel ID or PIN
AGENCY	Text	TBD	The entity that created the polygon and can answer specific questions about the history and geometry of the polygon.	Yes	TBD
UPDATED	Date	N/A	The date that the data was received by the Parcel Framework.	Yes	N/A
MODIFIED	Date	N/A	The date that the polygon was last edited by the agency.	Yes, if exists	N/A
WEBSITE	Text	255	The URL for a public internet site for further	Yes, if exists	Examples: Ada County

			information.		http://www.adacountyassessor.org/propsys/ParcelSearch.jsp Canyon County http://id-canyon-assessor.governmaxa.com/propertymax/rover30.asp Idaho Department of Lands http://gis1.idl.idaho.gov/DLR/
COUNTY	Text	20	The Idaho county within which the PARCEL_ID is relevant.	Yes	There are 44 possible county values for Idaho.

3.4. Additional Required Attributes for Inter-Governmental Distribution

The following attributes are required for polygons in the Parcel Framework provided to governmental entities.

Field Name	Data Type	Length	Description	Required	Examples
OWNER_1	Text	TBD	Owner of Parcel	Yes	
OWNER_2	Text	TBD	Additional owner of parcel	Yes	
MAILING_ADDRESS_1	Text	TBD	Mailing address of owner	Yes	
MAILING_ADDRESS_2	Text	TBD	Additional mailing address of owner	Yes	
MAILING_CITY	Text	TBD	Mailing city of owner	Yes	
MAILING_STATE	Text	TBD	Mailing state of owner	Yes	
MAILING_ZIPCODE	Text	TBD	Mailing U.S. zip code of owner	Yes	
MAILING_COUNTRY	Text	TBD	Mailing country of owner	Yes	
SITE_ADDRESS	Text	TBD	Site address of property	Yes	
SITE_ZIPCODE	Text	TBD	Zip code of property	Yes	
CATEGORY_1	Text	2	Assessed land use	Yes	
CATEGORY_2	Text	2	Assessed land use	Yes	
CATEGORY_3	Text	2	Assessed land use	Yes	
CATEGORY_4	Text	2	Assessed land use	Yes	
CATEGORY_5	Text	2	Assessed land use	Yes	
CATEGORY_6	Text	2	Assessed land use	Yes	
CATEGORY_7	Text	2	Assessed land use	Yes	
IRRIGATED_ACREAGE	Float		Irrigated acreage by land use category	Yes	
ZONING	Text	TBD	Zoning category	Yes	
LEGAL_DESC_1	Text	TBD	Legal description	Yes	
LEGAL_DESC_2	Text	TBD	Legal description	Yes	

LEGAL_DESC_3	Text	TBD	Legal description	Yes	
LEGAL_DESC_4	Text	TBD	Legal description	Yes	
LEGAL_DESC_5	Text	TBD	Legal description	Yes	
SUBDIVISION _NAME	Text	TBD	Subdivision name	Yes	
VALUATION	TBD	TBD	Assessed value of property	Yes	

3.5. **Data Quality**

The Parcel Framework layer will accept parcel data from agencies with minimal expectations of data quality. Inclusion into the Parcel Framework layer will likely lead to improved data quality as agencies and data customers provide and receive feedback on data quality issues. Refer to the earlier parts of this standard regarding specific data quality topics such as accuracy and edge matching.

Appendix A: References

Idaho Geospatial Office, November 2009. *White Paper on Parcel Mapping Concept*. Internet. http://gis.idaho.gov/framework/White%20Paper%20re%20Parcel%20Mapping%20Fund%20110609.pdf

Idaho Geospatial Office, Public Safety Technical Working Group, February 16, 2010. *Structures Data Exchange Standard*, Version 0.4. Internet. http://gis.idaho.gov/framework/structures/FinalDraftStructureStandard_vdot4.pdf

Idaho Geospatial Office, Public Safety Technical Working Group, November 30, 2009. *Data Exchange Standard for Emergency Service Zones*, Revision 6. Internet. http://gis.idaho.gov/igo/Draft%20Data%20Exchange%20Standard%20for%20ESZ%20rev6.pdf

INSIDE Idaho, April 2010. Project overview and geospatial metadata for *Road Transportation Framework of Idaho*, University of Idaho, Moscow, Idaho. Internet. http://insideidaho.org/geodata/frameworkPilot/transportation/

The University of Washington Geographic Information Service at the School of Forest Resources, January 20, 2010. Project overview and technical documentation of the *Washington State Parcel Database*, University of Washington, Seattle, Washington. Internet. http://depts.washington.edu/wagis/projects/parcels/

State of Oregon. *The Oregon Map.* Internet. http://www.ormap.com/index.cfm

Federal Geographic Data Committee (FGDC), Subcommittee on Cadastral Data, September 2007. *State Stewardship for Parcel Data.* Internet. http://www.ncgicc.com/Portals/3/documents/StateStewardship_CadastralData_%20Sept2007.pdf

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Environmental Systems Research Institute (ESRI). Internet. http://www.esri.com

Information Technology Resource Management Council (ITRMC). *Information and Data Policy P5000, Category: P5030 Framework Standards Development Policy.* http://itrmc.idaho.gov/psg/p5030.pdf

Information Technology Resource Management Council (ITRMC). *Enterprise Standards S4000 Geographic Information Systems (GIS) Data, Category: S4220 Geospatial Metadata.* http://www2.state.id.us/itrmc/plan&policies/Standards/S4220_GeospatialMetadata.pdf

Appendix B: Glossary

Agency: the entity that created the geospatial features and can answer specific questions about the history and the geometry of the data. (Idaho Parcel Standard Team)

Data Customer: anyone who uses the Parcel Framework layer. This includes public citizens, private businesses, educational institutions, non-profit organizations, and government agencies at all levels. (Idaho Parcel Standard Team)

Encoding: the recording or reformatting of data into a computer format. Data may be encoded to reduce storage, increase security, or to transfer it between systems using different file formats. In GIS, analog graphic data, such as paper maps and images are encoded into computer formats by scanning or digitizing. (ESRI)

Framework: statewide base map datasets identified and described in the Strategic and Business Plans for Development and Deployment of Idaho's Spatial Data Infrastructure (http://gis.idaho.gov/IGO/stratplan.htm) and depicted in the Framework Diagram (http://gis.idaho.gov/Framework.htm). (ITRMC P5030)

Parcel: a single cadastral unit which is the spatial extent of the current rights and interests in real property. (Idaho Parcel Standard Team)

Parcel Framework layer: a statewide parcel layer stored as polygons. The Idaho Parcel Framework layer will contain parcels from a variety of agencies--from local, county, state, federal, and tribal organizations. (Idaho Parcel Standard Team)